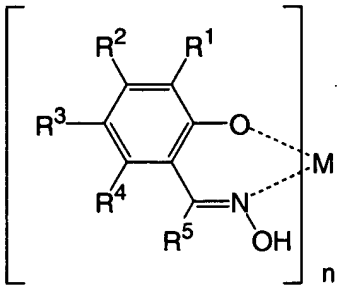
AMENDMENTS

1. (currently amended)

A dye stabilizer represented by the following formula:



(1)

wherein:

M is a metal ion;

n is 2 or 3;

R^1, R^2, R^3, R^4 and R^5 are, independently, R_f-A- (wherein R_f and A are defined below), hydrogen, hydroxyl, halogen, nitro, cyano, alkyl, heteroalkyl, aryl, heteroaryl, alkylaryl, arylalkyl, alkyl-heteroaryl, heteroalkylaryl, aryl-heteroalkyl, heteroarylalkyl, alkoxy, aryloxy, benzoyl, acetyl, carbonyl, sulfonyl, amido, carbamoyl, sulfonamido, sulfamoyl or heterocyclyl, or any two of R^1, R^2, R^3, R^4 or R^5 together ~~may~~ form a cycloalkyl or heterocyclic group, provided that at least one of R^1, R^2, R^3, R^4 and R^5 is R_f-A-;

A in R_f-A- is absent, oxygen or an alkylene chain; and

R_f is a fluorinated alkyl, ~~or~~ a fluorinated aryl, or a ~~low/medium molecular weight~~ fluorinated polymeric or oligomeric moiety.

2. (original)

The dye stabilizer of Claim 1 wherein said metal ion is a divalent metal ion.

3. (currently amended)

The dye stabilizer of Claim 2 wherein said metal ion is Co, Cu, Fe, Mn, Ni, Zr, Pd, Pt or Zn ion.

4. (currently amended)

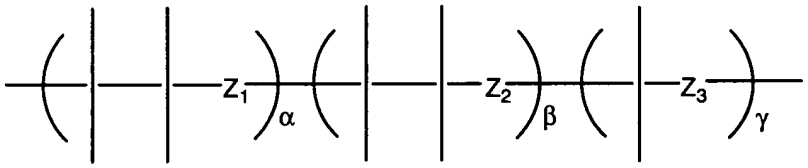
The dye stabilizer of Claim 3 wherein said metal ion is Ni ion.

5. (currently amended)

The dye stabilizer of Claim 1 wherein R_f is prepared from one or more types of ~~the~~ fluorinated monomers selected from ~~a~~ the group consisting of epoxide, hydrofuran, cyclolactone, cyclolactam, acrylate, methacrylate and vinyl.

6. (currently amended)

The dye stabilizer of Claim 1 wherein R_f is:



wherein the open and not designated substituent positions ~~(not designated)~~ on the main chain of R_f ~~can be the same or different and may independently be~~ are independently selected from ~~a~~ the group consisting of hydrogen, halogen ~~(especially fluoro)~~, alkyl, aryl, alkylaryl, fluoroalkyl, fluoroaryl, fluoroalkylaryl, $-OR^{11}$, $OCOR^{11}$, $-COOR^{11}$, $-CONR^{11}R^{12}$ (wherein R^{11} and R^{12} are independently hydrogen, alkyl, aryl, alkylaryl, fluoroalkyl, fluoroaryl, fluoroalkylaryl or fluorinated polyether) and substituted derivatives thereof;

Z_1, Z_2, and Z_3 are independently oxygen or absent;

α, β and γ are the weight fractions of the corresponding repeating units and are independently in the range of 0-1 with their sum no greater than 1.

7. (original)

The dye stabilizer of Claim 1 wherein one of R^1, R^2, R^3, R^4 and R^5 is R_f-A- and the remaining four are independently hydrogen or alkyl.

8. (original)

The dye stabilizer of Claim 7 wherein one of R^1, R^2, R^3 and R^4 is R_f-A-, R^5 is alkyl and the remaining three are all hydrogen.

9. (original)

The dye stabilizer of Claim 8 wherein R^5 is methyl.

10. (original)

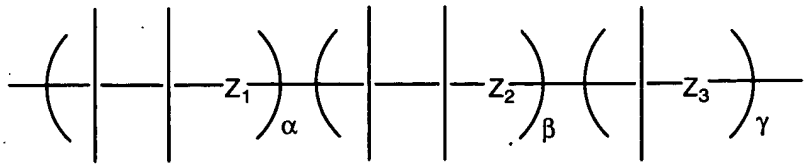
The dye stabilizer of Claim 7 wherein A in R_f-A- is oxygen or absent and R_f is a completely or partially fluorinated alkyl of 6 to 20 carbon atoms.

11. (original)

The dye stabilizer of Claim 6 wherein A in R_f-A- is oxygen or an alkylene chain and R_f is a fluorinated polymeric or oligomeric chain.

12. (currently amended)

The dye stabilizer of Claim 11 wherein R_f is:



wherein the open and not designated substituent positions ~~(not designated)~~ on the main chain of R_f ~~can be the same or different and may independently be~~ are independently selected from ~~a~~ the group consisting of hydrogen, halogen ~~(especially fluoro)~~, alkyl, aryl, alkylaryl, fluoroalkyl, fluoroaryl, fluoroalkylaryl, -OR^{11}, $OCOR^{11}$, -$COOR^{11}$, -$CONR^{11}R^{12}$ (wherein R^{11} and R^{12} are independently hydrogen, alkyl, aryl, alkylaryl, fluoroalkyl, fluoroaryl, fluoroalkylaryl or fluorinated polyether) and substituted derivatives thereof;

Z_1, Z_2, and Z_3 are independently oxygen or absent;

α, β and γ are the weight fractions of the corresponding repeating units and are independently in the range of 0-1 with their sum no greater than 1.

13. (original)

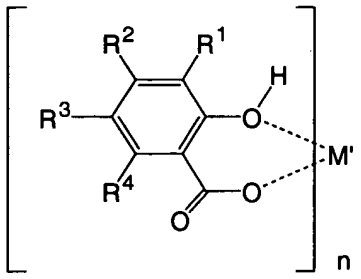
The dye stabilizer of Claim 12 wherein the open substituent positions are independently hydrogen, fluorine or fluorinated alkyl.

14. (original)

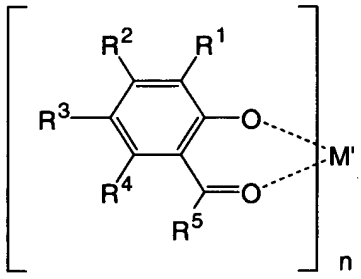
The dye stabilizer of Claim 11 wherein said fluorinated polymeric or oligomeric chain is a fluorinated polyether.

15. (currently amended)

A dye stabilizer represented by Formula 2 or 3:



Formula 2



Formula 3

wherein:

M' is absent or a metal ion;

n is 2 or 3;

R^1, R^2, R^3, R^4 and R^5 are independently, R_f-A- (wherein R_f and A are defined below), hydrogen, hydroxyl, halogen, nitro, cyano, alkyl, heteroalkyl, aryl, heteroaryl, alkylaryl, arylalkyl, alkyl-heteroaryl, heteroalkylaryl, aryl-heteroalkyl, heteroarylalkyl, alkoxy, aryloxy, benzoyl, acetyl, carbonyl, sulfonyl, amido, carbamoyl, sulfonamido, sulfamoyl or heterocyclyl, or any two of R^1, R^2, R^3 or R^4 in Formula 2 or any two of R^1, R^2, R^3, R^4 or R^5 in Formula 3 together ~~may~~ form a cycloalkyl or heterocyclic group, provided that at least one of R^1, R^2, R^3 and R^4 in Formula 2 and at least one of R^1, R^2, R^3, R^4 and R^5 in Formula 3 is R_f-A-;

A in R_f-A- is absent, oxygen or an alkylene chain; and

R_f is a fluorinated alkyl, or a fluorinated aryl, or a ~~low/medium molecular weight~~ fluorinated polymeric or oligomeric moiety.

16. (original)

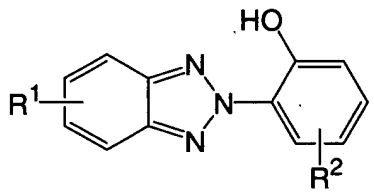
The dye stabilizer of Claim 15 wherein said metal ion is Ni, Co, Cu, Fe, Mn, Zr, Pd, Pt, Mg, Al or Zn.

17. (currently amended)

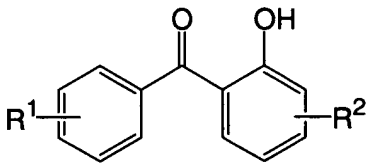
The dye stabilizer of Claim 15 wherein R_f is prepared from one or more types of ~~the~~ fluorinated monomers selected from ~~a~~ the group consisting of epoxide, hydrofuran, cyclolactone, cyclolactam, acrylate, methacrylate and vinyl.

18. (original)

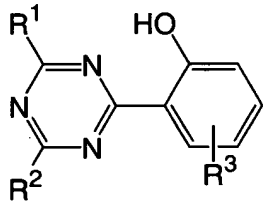
A dye stabilizer represented by Formula 4, 5 or 6:



Formula 4



Formula 5



Formula 6

wherein:

R^1, R^2 and R^3 are independently, R_f-A- (wherein R_f and A are defined below), hydrogen, hydroxyl, halogen, nitro, cyano, alkyl, heteroalkyl, aryl, heteroaryl, alkylaryl, arylalkyl, alkyl-heteroaryl, heteroalkylaryl, aryl-heteroalkyl, heteroarylalkyl, alkoxy, aryloxy, benzoyl, acetyl, carbonyl, sulfonyl, amido, carbamoyl, sulfonamido, sulfamoyl or heterocyclyl, provided at least one of R^1 and R^2 in Formula 4 or 5 and at least one of R^1, R^2 and R^3 in Formula 6 is R_f-A-;

A in R_f-A- is absent, oxygen or an alkylene chain; and

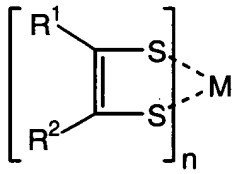
R_f is a fluorinated alkyl, ~~or~~ a fluorinated aryl, or a ~~low/medium molecular weight~~ fluorinated polymeric or oligomeric moiety.

19. (currently amended)

The dye stabilizer of Claim 18 wherein R_f is prepared from one or more types of ~~the~~ fluorinated monomers selected from ~~a~~ the group consisting of epoxide, hydrofuran, cyclolactone, cyclolactam, acrylate, methacrylate and vinyl.

20. (original)

A dye stabillzer represented by Formula 7:



Formula 7

wherein:

M is a metal ion;

n is 2 or 3;

R^1 and R^2 are independently, R_f-A- (wherein R_f and A are defined below), hydrogen, hydroxyl, halogen, nitro, cyano, alkyl, heteroalkyl, aryl, heteroaryl, alkylaryl, arylalkyl, alkyl-heteroaryl, heteroalkylaryl, aryl-heteroalkyl, heteroarylalkyl, alkoxy, aryloxy, benzoyl, acetyl, carbonyl, sulfonyl, amido, carbamoyl, sulfonamido, sulfamoyl or heterocyclyl, provided at least one of R^1 and R^2 is R_f-A-;

A in R_f-A- is absent, oxygen or an alkylene chain; and

R_f is a fluorinated alkyl, ~~or~~ a fluorinated aryl, or a ~~low/medium molecular weight~~ fluorinated polymeric or oligomeric moiety.

21. (currently amended)

The dye stabilizer of Claim 20 wherein ~~M~~ said metal ion is Co, Cu, Fe, Mn, Ni, Zr, Pd, Pt or Zn ion.

22. (original)

The dye stabilizer of Claim 1, 15, 18 or 20 wherein A in R_f-A- is absent and R_f is a completely or partially fluorinated alkyl of 6-20 carbon atoms.

23. (original)

The dye stabilizer of Claim 1, 15, 18 or 20 wherein R^1, R^2, R^3, R^4 and R^5 in Formulas 1 and 3, R^1, R^2, R^3 and R^4 in Formula 2, R^1 and R^2 in Formulas 4, 5 and 7 and R^1, R^2 and R^3 in Formula 6 are so selected that the total fluorine content of the dye stabilizer molecule is at least 10% by weight of the molecule.

24. (original)

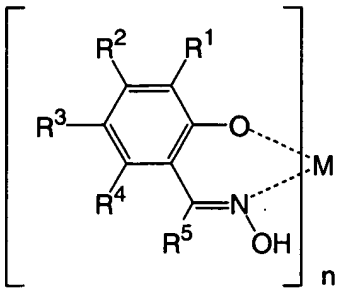
The dye stabilizer of Claim 23 wherein the total fluorine content of the dye stabilizer molecule is at least 20 % by weight of the molecule.

25. (original)

The dye stabilizer of Claim 24 wherein the total fluorine content of the dye stabilizer molecule is at least 50 % by weight of the molecule.

26. (currently amended)

An electrophoretic fluid comprising charged pigment particles dispersed in a dieletric solvent or solvent mixture, a dye or dye mixture and a dye stabilizer represented by Formula 1:



(1)

M is a metal ion;

n is 2 or 3;

R^1, R^2, R^3, R^4 and R^5 are, independently, R_f-A- (wherein R_f and A are defined below), hydrogen, hydroxyl, halogen, nitro, cyano, alkyl, heteroalkyl, aryl, heteroaryl, alkylaryl, arylalkyl, alkyl-heteroaryl, heteroalkylaryl, aryl-heteroalkyl, heteroarylalkyl, alkoxy, aryloxy, benzoyl, acetyl, carbonyl, sulfonyl, amido, carbamoyl, sulfonamido, sulfamoyl or heterocyclyl, or any two of R^1, R^2, R^3, R^4 or R^5 together ~~may~~ form a cycloalkyl or heterocyclic group, provided that at least one of R^1, R^2, R^3, R^4 and R^5 is R_f-A-;

A in R_f-A- is absent, oxygen or an alkylene chain; and

R_f is a fluorinated alkyl, ~~or~~ a fluorinated aryl, or a ~~low/medium molecular weight~~ fluorinated polymeric or oligomeric moiety.

27. (currently amended)

The electrophoretic fluid of Claim 26 wherein said metal ion is Co, Cu, Fe, Mn, Ni, Zr, Pd, Pt or Zn ion.

28. (currently amended)

The electrophoretic fluid of Claim 27 wherein said metal ion is Ni ion.

29. (currently amended)

The electrophoretic fluid of Claim 26 wherein R_f is prepared from one or more types of ~~the~~ fluorinated monomers selected from ~~a~~ the group consisting of epoxide, hydrofuran, cyclolactone, cyclolactam, acrylate, methacrylate and vinyl.

30. (currently amended)

The electrophoretic fluid of Claim 26 wherein one of R^1, R^2, ~~R^3 and~~ R^3, R^4 and R^5 is R_f-A- and the remaining four are independently hydrogen or alkyl.

31. (original)

The electrophoretic fluid of Claim 30 wherein one of R^1, R^2, R^3 and R^4 is R_f-A-, R^5 is alkyl and the remaining three are all hydrogen.

32. (original)

The electrophoretic fluid of Claim 31 wherein R^5 is methyl.

33. (original)

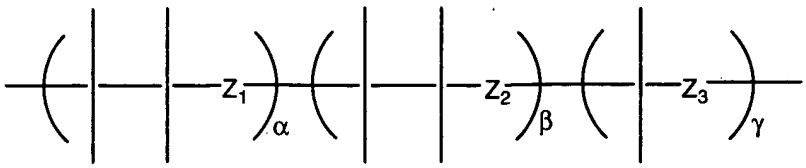
The electrophoretic fluid of Claim 30 wherein A in R_f-A- is oxygen or absent and R_f is a completely or partially fluorinated alkyl of 6 to 20 carbon atoms.

34. (original)

The electrophoretic fluid of Claim 30 wherein A in R_f-A- is oxygen or an alkylene chain and R_f is a fluorinated polymeric or oligomeric chain.

35. (currently amended)

The electrophoretic fluid of Claim 34 wherein R_f is:



wherein the open and not designated substituent positions ~~(not designated)~~ on the main chain of R_f ~~can be the same or different and may independently be~~ are independently selected from ~~a~~ the group consisting of hydrogen, halogen ~~(especially fluoro)~~, alkyl, aryl, alkylaryl, fluoroalkyl, fluoroaryl, fluoroalkylaryl, -OR^{11}, $OCOR^{11}$, -$COOR^{11}$, -$CONR^{11}R^{12}$ (wherein R^{11} and R^{12} are independently hydrogen, alkyl, aryl, alkylaryl, fluoroalkyl, fluoroaryl, fluoroalkylaryl or fluorinated polyether) and substituted derivatives thereof;

Z_1, Z_2, and Z_3 are independently oxygen or absent;

α, β and γ are the weight fractions of the corresponding repeating units and are independently in the range of 0-1 with their sum no greater than 1.

36. (original)

The electrophoretic fluid of Claim 35 wherein the open substituent positions are independently hydrogen, fluorine or fluorinated alkyl.

37. (currently amended)

The electrophoretic fluid of Claim 34 wherein said fluorinated polymeric or oligomeric chain is a fluorinated polyether.

38. (original)

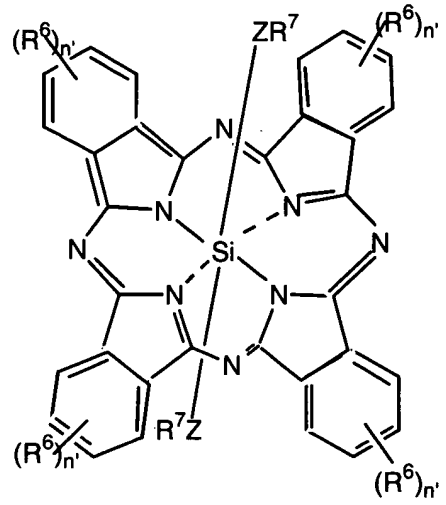
The electrophoretic fluid of Claim 30 wherein A in R_f-A- is absent and R_f is a completely or partially fluorinated alkyl of 6-20 carbon atoms.

39. (currently amended)

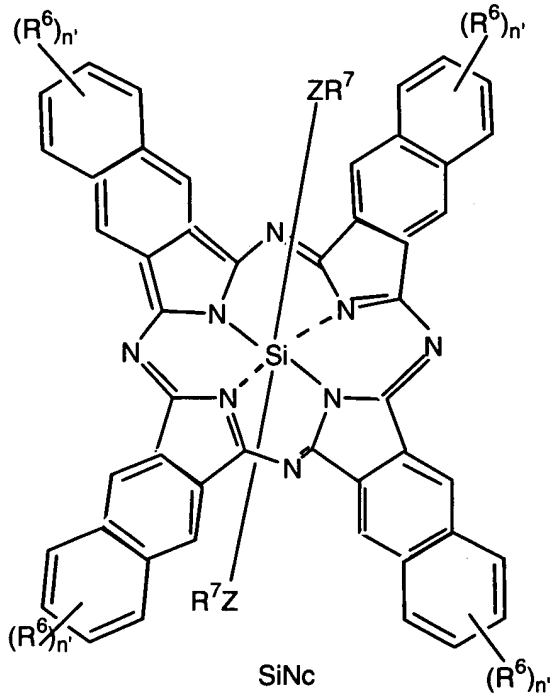
The electrophoretic fluid of Claim 26 wherein said ~~colorant~~ dye is a Si phthalocyanine or napthalocyanine dye.

40. (currently amended)

The electrophoretic fluid of Claim 39 wherein said Si phthalocyanine or napthalocyanine dye is represented by the following ~~formulas~~ formula SiPc or SiNc:



SiPc



SiNc

wherein:

n' is 0-4 for silicon phthalocyanine ~~(SiPc)~~ or 0-6 for silicon naphthalocyanine ~~(SiNc)~~;

R^6 is independently R_f'—X— (wherein R_f' is as defined below and X is a single bond, —CH_2O—, —CH_2CH_2O— or —CO—), alkyl, heteroalkyl, aryl, heteroaryl, alkylaryl, arylalkyl, heteroalkylaryl, alkyl-heteroaryl, heteroarylalkyl, aryl-heteroalkyl, R'O—, R'S—,

R'R"N—, R'CO—, R'OCO—, R'COO—, R'CONR''—, R'R"NCO—, R'NHCONR"—, $R'SO_2NR"$—, $R'R"NSO_2$— or halogenated, particularly fluorinated, derivative thereof in which R' and R" are independently hydrogen, R_f' (as defined below), alkyl, heteroalkyl, aryl, heteroaryl, alkylaryl, arylalkyl, heteroalkylaryl, alkyl-heteroaryl, heteroarylalkyl, aryl-heteroalkyl;

Z is O or NR' wherein R' is defined as above;

R^7 is hydrogen, R_f'—Y— (wherein R_f' is as defined below and Y is a single bond, —CH_2— or —CH_2CH_2—), alkyl, heteroalkyl or halogenated, particularly fluorinated derivatives thereof, or —$SiR^8R^9R^{10}$ wherein R^8, R^9, and R^{10} are independently an alkyl or fluoroalkyl group of 1 to 20 carbon atoms or alkoxy or fluoroalkoxy of 2 to 40 carbon atoms; and

R_f' is a fluorinated polymeric or oligomeric chain ~~(M.W.=100-100,000)~~ having molecular weight between 100-100,000.

41. (original)

The electrophoretic fluid of Claim 40 wherein the substituents, R^6, R^7, R^8, R^9, R^{10}, R_f', and n' are so selected that the total fluorine content of the silicon phthalocyanine dye is at least 20% by weight of the dye molecule.

42. (original)

The electrophoretic fluid of Claim 41 wherein the substituents, R^6, R^7, R^8, R^9, R^{10}, R_f', and n' are so selected that the total fluorine content of the silicon phthalocyanine dye is at least 30% by weight of the dye molecule.

43. (original)

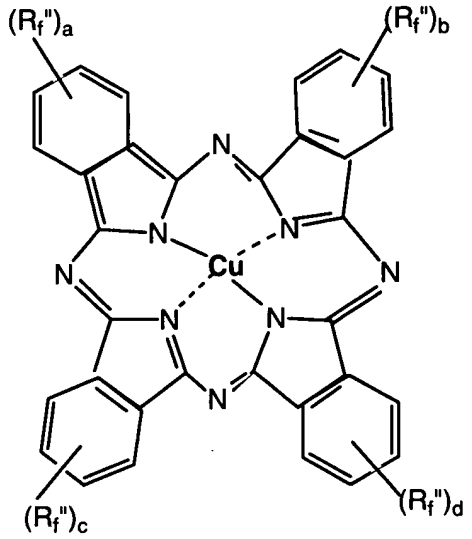
The electrophoretic fluid of Claim 42 wherein the substituents, R^6, R^7, R^8, R^9, R^{10}, R_f', and n' are so selected that the total fluorine content of the silicon phthalocyanine dye is at least 50% by weight of the dye molecule.

44. (currently amended)

The electrophoretic display of Claim 26 wherein said ~~colorant~~ dye mixture comprises a Si phthalocyanine or naphthalocyanine dye and a Cu phthalocyanine dye.

45. (original)

The electrophoretic display of Claim 44 wherein said Cu phthalocyanine dye is represented by the following formula:



CuPc

wherein $R_f"$ is $C_nH_xF_{2n+1-x}$ in which n is 1-18, x is 0-37, a, b, c and d are independently 0-4 provided that $a+b+c+d \geq 3$.

46. (original)

The electrophoretic fluid of Claim 45 wherein n is 4-12.

47. (original)

The electrophoretic fluid of Claim 44 wherein the ratio of the Si phthalocyanine or naphthalocyanine dye to the Cu phthalocyanine dye is 1/10 to 10/1.

48. (original)

The electrophoretic fluid of Claim 47 wherein the ratio of the Si phthalocyanine or naphthalocyanine dye to the Cu phthalocyanine dye is 1/5 to 5/1.

49. (original)

The electrophoretic fluid of Claim 48 wherein the ratio of the Si phthalocyanine or naphthalocyanine dye to the Cu phthalocyanine dye is 1/3 to 3/1.

50. (original)

The electrophoretic fluid of Claim 26 wherein said dielectric solvent is a halogenated solvent.

51. (original)

The electrophoretic fluid of Claim 50 wherein said solvent is a fluorinated solvent.

52. (currently amended)

The electrophoretic fluid of Claim 51 wherein said fluorinated solvent is selected from ~~a~~ the group consisting of perfluoroalkanes, perfluorocycloalkanes, perfluoroarylalkanes, perfluoro-tert-amines, perfluoropolyethers, hydrofluoropolyethers and poly(chlorotrifluoroethylene).

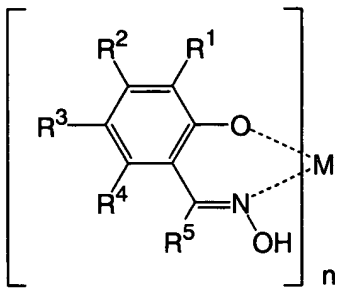
53. (currently amended)

The electrophoretic fluid of Claim 52 wherein said perfluoropolyether and hydrofluoropolyether are selected from ~~a~~ the group consisting of Solvay Solexis HT-170, HT-200, HT-230, ZT-180 and Dupont trifluoro(trifluoromethyl)-oxirane homopolymers K-6 and K-7 fluids.

54. (currently amended)

An electrophoretic display comprising display cells filled with ~~a display composition~~ an electrophoretic fluid which comprises charged pigment particles dispersed in a dielectric

solvent or solvent mixture, a dye or dye mixture and a dye stabilizer represented by the following formula:



(1)

wherein:

M is a metal ion;

n is 2 or 3;

R^1, R^2, R^3, R^4 and R^5 are, independently, R_f-A- (wherein R_f and A are defined below), hydrogen, hydroxyl, halogen, nitro, cyano, alkyl, heteroalkyl, aryl, heteroaryl, alkylaryl, arylalkyl, alkyl-heteroaryl, heteroalkylaryl, aryl-heteroalkyl, heteroarylalkyl, alkoxy, aryloxy, benzoyl, acetyl, carbonyl, sulfonyl, amido, carbamoyl, sulfonamido, sulfamoyl or heterocyclyl, or any two of R^1, R^2, R^3, R^4 or R^5 together ~~may~~ form a cycloalkyl or heterocyclic group, provided that at least one of R^1, R^2, R^3, R^4 and R^5 is R_f-A-;

A in R_f-A- is absent, oxygen or an alkylene chain; and

R_f is a fluorinated alkyl or aryl or a low/medium molecular weight fluorinated polymeric or oligomeric moiety.

55. (currently amended)

The display of Claim 54 ~~which is prepared by the Microcup® technology~~, wherein said display cells are microcups.

56. (original)

The display of Claim 54 which is prepared by a microencapsulation process.

57. (currently amended)

An electrophoretic fluid comprising charged pigment particles dispersed in a dieletric solvent or solvent mixture, a ~~colorant or colorant~~ dye or dye mixture and a dye stabilizer of Claim 15, 18 or 20.

58. (currently amended)

An electrophoretic display comprising display cells filled with ~~a display composition~~ an electrophoretic fluid which comprises charged pigment particles dispersed in a dielectric solvent or solvent mixture, a dye or dye mixture and a dye stabilizer of Claim 15, 18 or 20.

59 . (new)

The dye stabilizer of Claim 6 wherein said halogen is a fluorine.

60. (new)

The dye stabilizer of Claim 12 wherein said halogen is a fluorine.

61. (new)

The dye stabilizer of Claim 35 wherein said halogen is a fluorine.

62. (new)

The dye stabilizer of Claim 1, wherein R_f has a molecular weight of about 100 to about 100,000.